

Abstract of the Disclosure

A cooling device for cooling an object to be processed to a target temperature comprises a plurality of contact members mounted on a placing table, for supporting the object such that the object opposes a top surface of the placing table with an interval, temperature sensors for outputting temperature information of the object supported by the contact members, a first cooling unit for cooling the placing table to a temperature lower than the target temperature to cool the object, a second cooling unit for heating the object cooled by the first cooling unit to a temperature almost equal to the target temperature, and a contrast circuit for performing a switching operation between cooling by the first cooling unit and heating by the second cooling unit on the basis of the temperature information from the temperature sensors.